

How to Kill a Houseplant in Five Easy Steps

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How to Kill a Houseplant Step 1: *Place the plant in a site with insufficient light.*



Colorful croton needs plenty of light. *Nancy Rose*

Plants require light to convert carbon dioxide and water to sugar through the process of photosynthesis. Without sufficient light to manufacture food, plants must rely on stored food reserves and as the food reserves are depleted the plant begins to die.

There are three important characteristics of light that must be considered; intensity, duration, and quality. Intensity refers to the brightness of light. Light intensity influences the plant's ability to manufacture food as well as promotes growth and flowering. The intensity of light varies depending on the direction of the window, the season of the year, the distance the plant is placed from the window and anything that may be placed between the plant and the window. Some plants tolerate very low intensities of light while others require much higher intensities to grow and develop.

Duration, the second characteristic of light, can be defined as the length of time a plant is exposed to light. The length of time a plant receives light, commonly referred to as daylength, is important to flower bud initiation and proper shoot and leaf growth. The blooming times of poinsettias and Christmas cactus, for example, are determined by daylength.

The third characteristic, quality of light, refers to the wavelength or part of the visible spectrum available. Remember ROY G BIV (red, orange, yellow, green, blue, indigo, and violet), the mnemonic device we used in school to learn the colors of the visible spectrum or rainbow? The rays from the blue and the red ends of the spectrum are important for photosynthesis and the flowering of plants.

In many cases, good plant health can be maintained by simply moving the plant to a site where there is adequate light. This could mean moving it closer or further away from a window, placing it in a different spot in the room, or moving it into a different room entirely. But, what if your decor calls for a plant in a spot that is too dark? The answer is that you can keep the plant in that site if you supplement natural light with artificial

lighting, Supplemental lighting is no longer limited to 48 inch fluorescent tubes, commonly called "shop lights". There are not only attractive fixtures, but alternative light sources available. An advantage of using fluorescent lights is that they emit light while remaining cool to the touch and there is little danger of burning the plant's leaves. However, while fluorescent lights emit the blue wavelengths that promote strong growth of the plants, they lack the red rays necessary for many blooming plants. By combining cool white with warm white tubes or using full-spectrum grow lights, the light needs of most plants can be met. For best performance, fluorescent light must be kept six to eight inches from the plants.

High intensity discharge (HID), also called metal halide lamps are an excellent source of blue rays and are good for leafy growth and keeping plants compact. However, they are quite expensive to purchase and to operate and they emit a large amount of heat which limits their use in many homes. Another light source is high pressure sodium (HPS) lamps. They are an excellent source of red rays that trigger budding and flowering in plants. On the negative side, they emit an orange-red glow that distorts colors which is undesirable in home settings.

How to Kill a Houseplant Step 2: *Overwater the plant.*



Houseplants vary in their watering requirements. *Carl Hoffman*

It has often been noted that while light is the greatest limiting factor to growing houseplants, overwatering is the number one killer of houseplants. Determining when to water houseplants can be challenging. The frequency of watering depends on several factors, including the type of plant, the type of container, the humidity in the air, the room temperature, the stage of plant growth, and the potting medium. Watering frequently with small amounts of water or watering plants on a schedule can lead to problems because the plant may receive either too much or too little water. Overwatering will lead to saturated soil that encourages rotting of the root hairs and later rotting of the roots themselves. Yellowing of lower leaves on the plant is symptomatic of root rot and as the rot progresses, the plant may wilt even though the soil is wet.



English ivy will brighten a cool corner if not overwatered. *Carl Hoffman*

Most indoor plants like to dry out slightly between waterings. If the soil is dry to the touch, becomes lighter in color, and the pot feels lighter in weight, it is probably time to water. One of the best methods for determining when to water a plant is to insert your index finger into the soil up to the second joint and feel the soil. If the soil is dry at that depth, the plant should be watered. Do not allow the plant to wilt before it is watered. When watering, it is important to soak the entire soil ball. Water the plant until the water begins to collect in the saucer or tray beneath the pot. To avoid overwatering, it is important to empty or siphon any water that remains in the saucer or tray after about 20 minutes.

How to Kill a Houseplant Step 3: *Fertilize the plant improperly.*

The two biggest mistakes made with houseplant fertilization are to overfertilize plants growing in low light and to fertilize plants when they are not actively growing. Plants growing in low light often show weak, spindly growth which tempts us to attempt to correct it with fertilizer. In reality, the plant is suffering from low light which limits its ability to photosynthesize food and utilize the nutrients that are already present. The addition of more fertilizer just adds to the stress.

Likewise, a plant that is dormant during the naturally low light months of November through February will need fewer nutrients. Overfertilization can result in burned leaves and roots and ultimately the death of the plant. A rule of thumb that works well is to fertilize houseplants every two weeks from March through September with a water soluble fertilizer mixed at one-half the rate listed on the label. Plants grown under artificial lighting may need fertilization year round because they are not affected by seasonal light intensities.

How to Kill a Houseplant Step 4: *Plant it in an unsuitable potting medium.*

A plant's soil or potting medium has three major functions: to anchor the roots of the plant, to provide the plant with minerals and nutrients, and to allow air to reach the roots. The root cells of plants carry on aerobic respiration similar to human cells and, like human cells, if they receive insufficient oxygen they will die.

Outdoor garden soils are generally too compact for good growing conditions in a pot and may harbor diseases and insects. Before garden soil can be used as a potting medium, it must be pasteurized to destroy disease organisms, insects, and weed seeds. It should then be amended with equal parts of organic matter and drainage material. Pasteurized compost or peat moss work well as organic matter while perlite or sharp builder's sand serves as good drainage material.

There are many soilless potting mixtures on the market that vary in content and quality. When selecting a soilless medium, choose one that contains a mixture of ingredients and is of medium weight. Those that are on the lighter side usually contain straight peat moss which does not absorb water readily when it is dry and cannot adequately anchor a plant. On the positive side, soilless potting mixtures are lightweight, sterile, relatively inexpensive, and easy to use. Although a few of them may contain slow release fertilizers, most of them contain few nutrients and special attention must be given to proper fertilization of the plants.

How to Kill a Houseplant Step 5: *Place the plant in an area with insufficient humidity.*

Brown leaf tips and edges are often the result of low humidity in a plant's environment. Most of our houseplants are really cultivated forms of tropical or subtropical plants and their native habitat is very humid. While their native environment has humidity of 80 percent or higher, it is impractical, if not impossible, to maintain that kind of humidity for the plants in our homes. In fact, it is very difficult to maintain humidity of 50 percent and it often falls to 15 percent or less during the winter months when our homes are heated. While 45 to 50 percent humidity would be excellent for our plants, and for us, we must be realistic and strive for a minimum humidity of 30 percent.

The humidity around houseplants can be increased slightly by grouping them together. Place the plants that require higher humidity in the center of the group. Placing the plants on evaporating trays will also enhance the humidity around them. Place pebbles, glass beads, marbles or a rack on the bottom of a tray or saucer and then keep the tray partially filled with water. To prevent saturation of the soil, it is important that the water level remain below the bottom of the pots. A room humidifier has the advantage of increasing the humidity in the entire room or home and thus allows freedom of placement of the plants. Misting is no longer recommended as a method of increasing humidity around plants. This practice is not only ineffective in raising the humidity around the plant, but also may encourage the development of fungal diseases.

You CAN Succeed with Houseplants



Pothos is easy to grow in home or office. *Carl Hoffman*

Without being corrected, these five steps are likely to transform any thriving houseplant into a pot of decaying plant parts. Many houseplant problems can be avoided if attention is given to plant selection. The choice of houseplants is nearly limitless, ranging from the old favorites to the many new cultivars specifically adapted for modern interiors.

First, assess the growing conditions in the spot where you want to grow the plant, giving special attention to the amount of light available. Then look for a plant that will fit into that environment. There are many good houseplant books and other resources that list recommended plants for specific sites. In addition, most come with a special tag or label that specifies the growing conditions for that particular plant. Don't be tempted to select a plant just because it may look good in a spot. For example, a dish garden filled with cacti and succulents may fit perfectly on a bookshelf on the north side of your living room, but it requires bright light and will soon fail. Similarly, a low light plant like a dieffenbachia may look great in a corner near a south facing window, but the color of the leaves will soon bleach and turn brown because of the bright light.

Fortunately, by following recommended practices, many cultural problems can be avoided ensuring a long life of enjoyment for you and your indoor plants.

-from the U of M Extension Service